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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/29/2005

Yoshiaki Hamada

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EXAMINER

LEE, RIP A

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/520,177	Applicant(s) HAMADA ET AL.	
	Examiner RIP A. LEE	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4 and 14 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01-22-2008; 03-26-2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action follows a response filed on April 30, 2008. Claims 1 and 4 were amended. Claims 2, 3, and 5-13 were canceled, and new claim 14 was added. Claims 1, 4, and 14 are pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 4 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claims are drawn to a gasket material comprising a joint seat wherein said joint seat is contains 2-26 wt % of magnesium hydrate silicate fiber. Description of this particular embodiment of the invention appears on pages 6 and 7 of the specification, however there is no teaching that the gasket material necessarily contains 2-26 wt % of the magnesium hydrate silicate fiber. In fact, data presented in Table 1, on page 14, reveal inventive compositions containing 30 wt % and 38 wt % of magnesium hydrate silicate fiber.

Based on these considerations, it is concluded that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention, namely, a gasket material comprising a joint seat wherein said joint seat is contains 2-26 wt % of magnesium hydrate silicate fiber.

3. Claims 1, 4 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Amended claims introduce structural limitations for the claimed article, namely a joint seat having two or three layers of structure. The joint seat is prepared by mixing, kneading, pressurized laminating, and vulcanizing an ingredient to form the joint seat. The claims are indefinite because it is not clear which layer(s) is(are) comprised of the claimed ingredient. The examiner has turned to the specification for guidance; figures and written description identify joint seat **1** with front surface layer, middle layer, and back surface layer **1a**, **1b**, and **1c**, respectively, but there is no specific disclosure of the composition of each layer. Working examples (Tables 2-7) show joint seats comprising a front surface and a back surface with each surface prepared from completely different compositions. In light of these considerations, the location of the recited composition in the claimed article is not made clear. Accordingly, it is deemed that instant claims are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Objections

4. Claim 14 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 1 is drawn to a gasket material that is manufactured from a joint seat having two or three layers of structure wherein the joint seat is prepared by a specified process. Claim 14 is drawn to a gasket material comprising a joint seat having two or three layers of structure prepared by the same specified process recited in claim 1. Both inventions cover the same material despite the slight difference in wording because the gasket prepared from the joint seat naturally comprises the joint seat, and a gasket comprising the joint seat will be made from the joint seat.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character not mentioned in the description: Figure 21, reference character **1d**.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spillner *et al.* (U.S. 5,306,553) in view of Dickerman *et al.* (U.S. 4,849,295).

Spillner *et al.* teaches a flat gasket **1** comprising two fiber mats *7a* and *7b*. Fiber mats are comprised of 2-20 wt % of synthetic organic (aramid) fiber, 10-70 wt % of inorganic filler which is needle shaped or globular, 10-70 wt % of inorganic filler having a grain size maximum of 0.01 mm and maximum specific surface area of 30 m²/g. The needle shaped filler is a magnesium aluminum silicate of the sepiolite or attapulgite family. In this case, magnesium aluminum silicate is a species of the genus of magnesium silicate. The reference does not disclose use of antioxidant. Dickerman *et al.* teaches incorporation of up to 4 parts by weight of hindered phenolic antioxidant (col. 3, lines 12 and 57) to impart stability to nitrile rubber gaskets. It would have been obvious to one having ordinary skill in the art to include phenolic antioxidant in the fiber mat compositions of Spillner *et al.* in order to stabilize the resin against effects of light and heat.

9. Claims 1, 4, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura *et al.* (JP 62-127380) in view of Dickerman *et al.* (U.S. 4,849,295) and Spillner *et al.*; supporting reference Hashimoto *et al.* (U.S. 5,106,790) relied upon for definition.

Mimura *et al.* teaches a joint sheet comprising 5-50 wt % of fibrillated aromatic polyamide (aramid) fiber, 5-75 wt % of fibrous sepiolite (20-100 µm length), 10-40 wt % of nitrile rubber binder, up to 80 wt % of inorganic fiber (glass fiber) and filler (clay), and 0.1-10 wt % of antistatic agent. Hashimoto *et al.* identifies sepiolite as hydrous magnesium silicate; see col. 2, line 29. The reference does not disclose use of antioxidant. Dickerman *et al.* teaches incorporation of up to 4 parts by weight of hindered phenolic antioxidant (col. 3, lines 12 and 57) to impart stability to nitrile rubber gaskets. It would have been obvious to one having ordinary skill in the art to include phenolic antioxidant in the fiber mat compositions of Spillner *et al.* in order to stabilize the resin against effects of light and heat. With regard to physical construction of a gasket, one having ordinary skill in the art would have found it obvious to make a gasket depending on end-use; Spillner *et al.* discloses manufacture of a gasket from two mats. The combination of references would have suggested to one having ordinary skill in the art that

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the joint sheet of Mimura *et al.* is utilized for making gaskets, such as the one disclosed in Spillner *et al.* Therefore, it would have been obvious to one having ordinary skill in the art to make a two layer gasket using the joint sheet of Mimura *et al.* containing added antioxidant for stability.

Response to Arguments

10. The rejection of claims under 35 U.S.C. 112, 2nd paragraph, set forth in paragraphs 10 and 11 of previous office action dated December 31, 2007, have been withdrawn in view of current amendments to claims.

The rejections of claims based on Amano *et al.* (U.S. 5,180,631), Honda *et al.* (U.S. 3,968,198), Kubota (JP 6-179689), and Spillner *et al.* (U.S. 5,306,553), set forth in paragraphs 14-17 of previous office action, have been overcome by amendment.

Prior Art

The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure. The following references have been cited to show the state of the art with respect to nitrile rubber sheet/gasket containing fibrous non-asbestos filler.

Kaneda (JP 9-137153) discloses a composite rubber sheet comprising 100 pw of acrylonitrile-butadiene rubber, 10-50 pw of sepiolite (fibrous magnesium silicate), 30-70 pw of aramid fiber and 0.1-1 pw of titanium coupling agent.

Fujiwara *et al.* (JP 1-35176) discloses a sheeted gasket comprising 100 pw of sepiolite fiber having an aspect ratio of 50 or more and 10-40 pw of synthetic rubber such as nitrile rubber.

Masuda *et al.* (JP 2-88678) teaches a non-asbestos friction material containing 10-30 wt % of sepiolite, 3-10 wt % of aramid fiber, 20-40 wt % of rubber material (such as nitrile rubber) and 5-15 wt % of calcined alumina or other friction improving agent (clay or graphite).

Hashimoto *et al.* (U.S. 5,106,790), cited I paragraph 9 for definition purposes, discloses an asbestos-free spiral gasket comprised of (a) 1-10 wt % of NBR binder, (b) 36.5 wt % or more

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of fibrous filler comprising 5-20 wt % of ceramic fiber, 13.5-25 wt % of sepiolite, and 1-10 wt % of organic (hemp pulp) fiber, and (c) less than 59 wt % of inorganic filler.

Halout *et al.* (U.S. 5,437,767) discloses a gasket sheet comprising 5-20 wt % of fiber, at least 62 wt % of filler, about 18 wt % or less of polymeric binder (NBR/carboxylated NBR) and at least about 3 wt % of gel-forming mineral filler. The fiber component is typically a mixture of glass fiber and aramid fiber. One type of gel-forming mineral filler is sepiolite. A representative composition comprises 10.4 wt % of NBR, 10.0 wt % of glass fiber, 3.0 wt % of aramid fiber, 3 wt % of sepiolite, and the balance being inorganic filler.

Numano (JP 3-115484) discloses a coating composition for treating the surface of a rubber joint sheet comprising 1-30 wt % of finely divided hydrous magnesium silicate, 0.5-10 wt % carboxymethyl cellulose, and 50-98 wt % of water. Surfaces thus treated are prevented from sticking to coupling flanges due to seizure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/
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July 24, 2008